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MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2019/2020

DPA5018 – PROGRAMMING FOR BUSINESS APPLICATIONS (DIT)

02 MARCH 2020
9.00 a.m. – 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENT:

1. This question paper consists of 6 pages with 10 Multiple Choice Questions and 4 structured questions.
2. **SECTION A:** Answer **ALL** questions. Please shade your answers on the OMR sheet provided.
3. **SECTION B:** Answer **ALL** questions. Please write your answers in the answer booklet provided.

SECTION A: MULTIPLE CHOICE QUESTIONS (MCQ) (10 Marks)

Instruction: Answer all the questions in this section and shade your answers on the OMR sheet provided.

1. The second argument passed to the *MessageBox.Show* method specifies _____.

- A. the type of icon on the dialog
- B. the text contained in the dialog
- C. the text displayed in the dialog's title bar
- D. the number and type of Buttons on the dialog

2. What is the value stored in a variable *strMessage* in the statement below?

```
strMessage = Left("Go For It",3)
```

- A. For
- B. Go f
- C. It
- D. r It

3. If the number of items exceeds the number that can be displayed, a scroll bar is automatically added to the _____ control.

- A. Listbox
- B. Radio button
- C. Check box
- D. ComboBox

4. What value is assigned to *lblSum.Text* by the following code?

```
Dim intTotal As Integer = 0
  For intOuter = 3 To 1 Step -1
    For intInner = intOuter To 4
      intTotal += intOuter * intInner
    Next
  Next
lblSum.Text = intTotal.ToString()
```

- A. 53
- B. 37
- C. 12
- D. 49

5. The _____ method removes a form from the desktop without removing it from the computer memory.

- A. Delete
- B. Drop
- C. Hide
- D. Unload

Continued ...

6. Which of the following statements is **TRUE**?
- A. Control statements cannot be placed inside other control statements.
 - B. If the loop is to be executed at least once, the condition should be checked at the top of the loop.
 - C. In a Do...Loop Until statement, the loop-continuation condition is tested after the loop body is performed.
 - D. A global variable cannot be used in all procedures of a project.
7. The _____ operator compares two numbers to determine if they are not equal.
- A. !=
 - B. <>
 - C. >=<
 - D. ^=
8. A _____ is Visual Basic's control that enables you to display an image.
- A. PictureBox
 - B. ImageBox
 - C. ImageControl
 - D. PictureControl
9. Assume that you have a text box control named txtBox. Which of the following is the correct event handler that will be executed when a focus of the text box is lost?
- A. txtBox.Lost
 - B. txtBox.LostFocus
 - C. txtBox.Leave
 - D. txtBox.Text
10. Which of the following is the correct value returned by the method below?

```
Dim faculty As String = "Faculty of Science and Technology"  
TextBox1.Text = faculty.IndexOf("cie")
```

- A. -1
- B. 3
- C. 11
- D. 12

SECTION B: STRUCTURED QUESTIONS (40 Marks)

Instruction: Answer all the questions in this section and write your answers in the answer booklet provided.

QUESTION 1**(10 Marks)**

Write the code for *btnAmount* to calculate the total amount based on the selected toppings and the quantity of ice creams. Each ice cream costs RM 3.00.

User can select one or more ice cream toppings. The price for each topping is shown in the table below.

Toppings	Price
Vanilla	RM 1.30
Chocolate	RM 1.80
Caramel	RM 1.50
Strawberry	RM 2.50

The screenshot shows a window titled "Ice Cream" with the following controls:

- "Ice Cream Quantity:" label followed by a text box. An external label "txtQuantity" has an arrow pointing to this text box.
- "Ice Cream Toppings" label followed by a group box containing:
 - Four checkboxes: "Vanilla", "Chocolate", "Caramel", and "Strawberry".
 - Four corresponding combo boxes: "cboVanilla", "cboChocolate", "cboCaramel", and "cboStrawberry". Arrows point from each checkbox to its respective combo box.
- "btnAmount" button with an arrow pointing to the "Amount" label.
- "Amount" label followed by "RM" and a text box. An external label "txtAmount" has an arrow pointing to this text box.

Coding Guide

- In the *btnAmount* event procedure,
 - Declare appropriate variables to store the user input data.
 - Get the quantity of ice cream from the user.
 - Use *If...End If* statement to determine the selected checkbox/checkboxes and calculate the total amount based on user selection of ice cream toppings.
 - Calculate the total amount including the price of each ice cream and selected toppings.
 - Display the total amount using the currency format in the *txtAmount* textbox.

Continued ...

QUESTION 2**(10 Marks)**

Write the code for *btnCalculate* to calculate the total amount based on the selected card type and quantity. Discount will be given based on certain quantity. The price for each card is shown in the table below.

Card type	Price per card
Vintage	RM 0.30
Kraft Paper	RM 0.25
Glossy Fun	RM 0.40

Coding Guide

- In the *btnCalculate* event procedure,
 - Declare appropriate variables to store the user input data.
 - Get the quantity from the user.
 - To calculate the total price, call the function *discount()* and pass the quantity as the argument to get the discount rate, and call the function *cardprice()* to get the price for selected card type.
- In function *discount()*:
 - Use select ... case to determine the discount based on the quantity and return the value to *btnCalculate* even procedure.
 - If the user order more than 10,000 cards, set the discount rate to 35%, for 5000 or more cards, the discount rate is 15%, 10% discount rate for 1000 or more cards.
- In function *cardprice()*:
 - Use If ... Elseif ... End If statement to determine the card price and return the value to *btnCalculate* even procedure.

Continued ...

QUESTION 3**(10 Marks)**

Create a Windows form application that writes data to csv formatted text file named *software.txt*. When the 'Submit Order' button (*btnOrder*) is clicked, data from user input will be saved into the text file.

The screenshot shows a Windows form titled "Software Order Form". Inside the form, there are three input fields: "Email Address:" (a text box), "Number of Licenses:" (a text box), and "Software:" (a dropdown menu). Below these fields is a button labeled "Submit Order". Arrows from external labels point to these controls: "txtEmail" points to the email text box, "txtLicenses" points to the licenses text box, "cboSoftware" points to the software dropdown menu, and "btnOrder" points to the "Submit Order" button. The dropdown menu is currently open, showing three options: "Adobe Photoshop", "Microsoft Office 2019", and "Symantec Endpoint".

Coding Guide

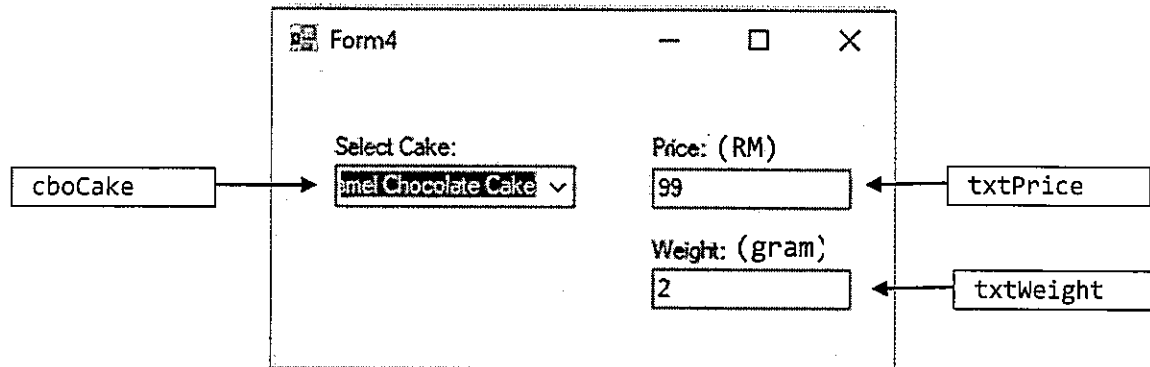
- In the *btnOrder* event procedure,
 - Declare appropriate variables to store the user input data.
 - Save the value into the text file using the *AppendText* method.
 - Clear the values from the *txtEmail* and *txtLicenses* textboxes.
- Below is the current content of the *software.txt* text file.

```
suhayl@gmail.com,1,Adobe Photoshop  
suhaan@gmail.com,2,Microsoft Office 2019
```

Continued ...

QUESTION 4**(10 Marks)**

Create a Window application that retrieves the data recorded in the Movie Store database. In this application, the user selects the cake from the combo box and the respective price and weight will also appear in the textboxes.



The data are retrieved from Table *Cake* in Database *cake.accdb*. Below is the table structure and data which are already recorded in the database.

CakeID	CakeName	Weight (g)	Price (RM)
1	Caramel Chocolate Cake	2006	144
2	Black Sesame Cheesecake	2005	115
3	Chocolate Brownie Cake	1985	116
4	Chocolate Mango Mousse	2010	148

Coding Guide

- Declare the following as class level scope:
 - Declare a connection string variable for the database connection.
 - Declare **DataTable** object called *dtCake*.
 - Declare and initialize a variable called *rowindex* and set it to 0.
- In the Form Load event procedure,
 - Declare a string variable called *sqlStr* and initialize it with an SQL statement to retrieve all records from the *Cake* table.
 - Declare **OleDbDataAdapter** object called *dataAdapter*.
 - Declare **DataTable** object called *dtCake*.
 - The *dataAdapter* object will fill the *dtCake* Data Table and then it will be disposed.
- Create an event procedure where it will be triggered when user change to different item in the combo box
 - Using a For...Next loop to find a match from the Cake Name selected in the combo box and display the correct price and weigh of the cake in the appropriate textboxes.

End of Page.